Ratthasart Sonyaem 2008: Effect of Cassava on Growth Performance and Immunological System in Hybrid Catfish (*Clarias macrocephalus* x *Clarias gariepinus*). Master of Science (Animal Nutrition and Feed Technology), Major Field: Animal Nutrition and Feed Technology, Department of Animal Science. Thesis Advisor: Associate Professor Uthai Kanto, M.S. 74 pages.

Substitution of corn by cassava meal as a basal feed ingredient in hybrid catfish (*Clarias macrocephalus* x *Clarias gariepinus*) diet was studied by using CRD experimental design. Eight hundred (800) fingering hybrid catfish were divided into 16 groups of 50 animals each which were kept in fiberglass tank of 500 liters. Each group of the fishes was randomly fed an experimental diet as follows for 12 weeks. Diet 1: The control corn diet; Diet 2 and 3: Diet 1 but 50% and 100% of corn was replaced by cassava meal, respectively; and Diet 4: A commercial pelleted floating fish diet. There were no significant different in final body weight, weight gain, average daily gain (ADG), specific growth rate (SGR), survival rate (SR), feed intake (FI), feed conversion ratio (FCR), protein efficiency ratio (PER) and net protein utilization (NPU) among fishes on Diet 1, Diet 2 and Diet 3. But fishes on Diet 1-3 which are home-made feeds produced by a small extruder had significantly higher production performance ($p<0.01$) as well as lower feed cost of production ($p<0.01$) than those on the commercial diet (Diet 4). Fishes on diet containing 100% cassava replacement for corn (Diet 3) tended to have the highest T-lymphocyte proliferation ($p=0.06$) in day 3 after stimulating by *Aeromonas hydrophila* and had numerically higher ($p<0.01$) GSH at 8, 10 and 12 week than those fed with other diets. It could be concluded that cassava can be replaced for corn in hybrid catfish diet without any adverse effects on the animal performances but can reduce the animal production cost and provide the immunity improvement of the animals.

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Student's signature

Thesis Advisor's signature